

Virginia Western Community College

ITN 126

Internet of Things and Big Data Analytics

Prerequisites

[Add Prerequisites Here]

VCCS Course Description

Provides skills needed to ideate, design, prototype, and present the business value of an end-to-end Internet of Things (IoT) solution utilizing sensors and actuators, gateways, wired and wireless network connections and cloud services. Covers fundamentals of data analytics and the tools needed to apply data analyses to solve problems.

Semester Credits: 3

Lecture Hours: 3

Required Materials

Textbook

- To be determined

Other Required Materials:

None

VCCS COURSE OUTCOMES

- Explain the concepts, opportunities, and challenges of digital transformation using IoT.
- Design and model IoT solutions using simulation tools.
- Design and prototype IoT solutions using electronics, micro-controllers and single board computers.
- Demonstrate the ability to securely connect the prototype to the Internet.
- Apply Python scripts to program the behavior of the IoT devices and to connect them to cloud services via APIs.
- Identify the main tenets of Big Data and Analytics.
- Describe and apply the data analysis process to solve problems.
- Apply the User-Centered Design Approach ("design thinking") to develop, rapidly prototype, refine, and pitch a business idea for an IoT solution.

Note to Instructors

None

TOPICAL DESCRIPTIONS

To be determined

[TITLE IX STATEMENT](#)

[ADA STATEMENT](#)

